

KNOWLEDGE ORGANISER – Introductory Topic

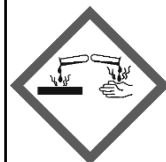
Key Word	Definition
beaker	Used for measuring and pouring liquids.
Bunsen burner	A device that uses methane gas to heat substances.
clamp stand	Made of 3 parts (a boss, clamp and clamp stand) and used to securely hold equipment during a practical.
conical flask	Cone shaped container used for liquids.
funnel	Used with filter paper to separate insoluble substances.
gauze	A wire mesh used on top of a tripod when heating.
heat proof mat	Placed underneath a Bunsen burner to protect the table.
measuring cylinder	Used for accurately measuring liquids.
test tube	A glass tube used for holding small amounts of chemicals.
thermometer	Used for measuring temperature.
tongs	Used for safely holding hot objects.
tripod	A stand with 3 legs used over a Bunsen burner for heating.



flammable



toxic



corrosive



harmful



irritant

Variables

Example investigation: Investigating how changing the height of a ramp affects the time taken for a car to travel down the ramp.

In an investigation there will be three types of variables:

Independent variable: The thing that you choose to change in an investigation.

e.g. The height of a ramp

There will only be **one** independent variable in a fair test

Dependent variable: The thing that you are measuring in an investigation

e.g. the time taken for the car to travel down a ramp

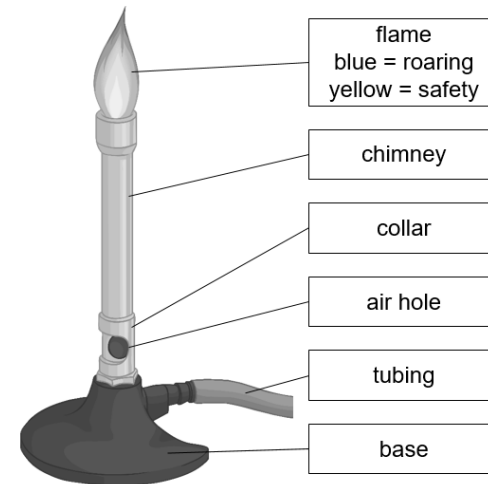
Control variables: These are kept the same as they could affect the results of the investigation. There will be several control variables in an investigation e.g.

- The length of the ramp
- The material the ramp is made of
- The material of the tyres on the car

Bunsen Burners

The air hole should always be **closed** when lighting the Bunsen burner so that the safety flame is used.

The blue (roaring) flame should be used when heating substances to avoid the build up of soot.



Measuring Equipment



Mass balance: Used for measuring the **mass** of an object (in g or kg)



Newton meter: Used for measuring the **weight** (force) of an object (in N)

Designing a Results Table

independent variable

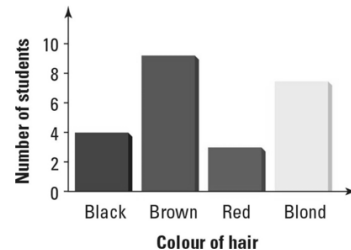
dependent variable

Blade length (cm)	Time taken to fall (s)			
	Test 1	Test 2	Test 3	Mean

Drawing Graphs

Categoric data is data that can be sorted into groups (or categories) e.g. number of people with different hair colours.
→ bar chart

Hair Colour	Number of Students
Black	4
Brown	9
Red	3
Blond	7



Continuous data is data that can occupy any value over a continuous range e.g. a measurement number.
→ line graph

Number of weeks	Height of plant (cm)
10	1.8
20	3.2
32	5.0

